

**ENVIRONMENTAL ASSESSMENT
RADAR REPAIR FACILITY**

**MIKE MONRONEY AERONAUTICAL CENTER
OKLAHOMA CITY, OKLAHOMA**

Prepared for

FEDERAL AVIATION ADMINISTRATION
Oklahoma City, Oklahoma

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1. INTRODUCTION

Roy F. Weston, Inc. (WESTON®) has been contracted by the Federal Aviation Administration (FAA) under Contract No. DTFA-02-98-D-98018 to perform an Environmental Assessment as required under the National Environmental Policy Act, for the construction of a warehouse style building to house the Radar Repair Facility at the FAA's Mike Monroney Aeronautical Center (MMAC) in Oklahoma City, Oklahoma.

Background

The new radar repair facility will be part of the MMAC. The aeronautical center is connected to the Will Rogers World Airport (WRWA), and was initially funded in 1957 using the Oklahoma City Airport trust. The facilities replaced many of the pre-World War II buildings that the army base had been using since the 1940's. The new complex of hangars, warehouses and offices were established as the MMAC after the FAA was created in 1958.

The MMAC is a support and service facility for the FAA and has served as a logistical center, training facility, supply depot, research center, and aircraft maintenance and modification center. The facility is located on property leased by the FAA from the Oklahoma City Airport Trust on the west side of, and adjacent to, the WRWA in southwestern Oklahoma City, Oklahoma. The facility includes approximately 1,000 acres of land and at least 58 buildings lining both the east and west sides of South MacArthur Boulevard, between SW 59th Street and SW 89th Street. The radar repair group is currently housed in the Logistics Services Building (LSB), which has been deemed structurally inadequate to house their activities. The new proposed facility will be built to provide a central location for all the antennae projects, and to comply with the mandate to remove the radar repair tasks from the LSB.

1.1 SCOPE AND PURPOSE OF PROPOSED ACTION

Radar rotor joints used on the antennae throughout the MMAC will be repaired and tested at the new radar repair facility. Currently the repair facility is housed in the LSB. The new building

for the radar repair group will be located next to the antennae test range in order to consolidate all the antennae and radar projects into a centralized area.

The proposed building will be a 9500 square foot shop, employing approximately 30 people. All work done pertaining to the construction project will be directly related to the construction of the building and any mitigation and erosion control associated with the construction.

1.2 SUMMARY OF ENVIRONMENTAL STUDY REQUIREMENTS

This document, together with its appendices and incorporations by reference, constitutes an Environmental Assessment (EA) pursuant to the National Environmental Policy Act of 1969 (NEPA), as amended. The EA presents an understanding of the problem and identifies reasonable alternative solutions, including the proposed action. The EA will also assist in the determination of any potentially significant impacts, and provide a basis for the FAA's findings of no significant impacts associated with the proposed action. The EA will identify special purpose Federal and state laws, regulations, and executive orders. It will also identify any necessary environmental permits, licenses, or other entitlements required by the proposal.

The proposed action is subject to NEPA review. NEPA establishes the national policies and goals for the protection of the environment and establishes a process to ensure that the environmental consequences of federal actions are adequately taken into account. The environmental process which NEPA defines is intended to help public officials make decisions that are based on a full understanding of the environmental impacts of proposed actions and take subsequent action that will "protect, restore and enhance the environment." Regulations for the implementation of NEPA are promulgated by the Council on Environmental Quality (CEQ).

1.3 PROJECT DESCRIPTION

The proposed action is the construction of a 9500 square foot shop facility using metal construction materials. An access road and parking area for 30 employees is also included in the plan. Temporary erosion control barriers and water retention ponds will be constructed during the construction of the new building. The purpose of the proposed action is to house the radar

INTRODUCTION

repair activities and facilitate the repair and testing of radar rotor joints. The facility will be adjacent to the current antennae test range site, located on Mac Arthur Blvd, within the MMAC in Oklahoma City, Oklahoma (Exhibit 1).

2. PROPOSED ACTION AND ALTERNATIVES

2.1 PROPOSED ACTION

The radar repair facility is currently housed in the LSB. The FAA Acquisition Program Baseline has deemed the LSB structurally inadequate for continued radar repair activities, and has mandated that all non-warehouse functions be moved out of the LSB facility. Therefore, alternative sites for the group were researched. Based on available land area and the co-location of like antenna repair and testing functions, the proposed site was selected.

2.1.1 Location and Operations

The WRWA is located in the southwestern portion of Oklahoma City, approximately eight (8) miles southwest of Oklahoma City's central Business District. The MMAC is located on the west central portion of the WRWA property boundary. The new facility will be located near the current antenna test range approximately 1 mile south of the current MMAC buildings on Mac Arthur road (Exhibit 2).

The radar repair group is the FAA's 24-hour onsite Antenna/Pedestal response team. The team provides onsite disassembly and assembly, modification, refurbishment, repair, testing, maintenance and design support to the radar systems. The group works closely with the radar test team, housed in the Air Route Surveillance Radar (ARSR) building adjacent to the site of the proposed action.

2.1.2 Personnel Summary

The currently scheduled personnel associated with the facility include seven (7) administrative personnel and 23 technicians.

2.1.3 Construction Program

The proposed action requires the construction of a 9500 square foot shop facility using metal construction. A parking lot to accommodate 30 employees, along with a short access road is also proposed.

2.2 OTHER ALTERNATIVES

In evaluating possible alternatives for the location of the radar repair facility, a number of considerations were critical. The location needed to be within the MMAC property boundaries, and the site needed to accommodate a 9500 square foot facility. In order to maximize business efficiency, the site would be chosen based on proximity to the ARSR radar test building. In addition, the possibility of unnecessary risks to the environment and extraordinary costs were avoided.

Two potential sites were chosen based on vicinity to the ARSR. The selected site of the proposed action is directly south of the ARSR. An alternative site, located to the north of the ARSR, was also considered. The alternative site was eliminated from consideration because the building would have interfered with the antenna range test field. The location of the proposed action, south of the current antennae test range, was chosen as the most suitable because it satisfied all of the selection criteria and did not interfere with other MMAC activities.

2.3 NO ACTION ALTERNATIVE

The no action alternative is to not build a new facility for radar repair activities. The property selected for the proposed action would continue to be unused industrially zoned property within the MMAC boundary. According to the FAA acquisition program baseline for the MMAC the radar repair facility activities can no longer take place in the LSB because it has been deemed structurally inadequate for the activities. Therefore, the no action alternative would mean that radar repair activities would not have a facility to maintain their operation. Therefore, the radar repair group would not be able to efficiently support the National Airspace System requirements for radar repair and maintenance.

2.4 ENVIRONMENTAL CONSEQUENCES

2.4.1 Proposed Action

Impacts from the proposed action will most likely fall into the following categories: air quality, noise and erosion during the construction phase, and potentially waste generation, water resources, land and soil quality, vegetation and wildlife resources, threatened and endangered species, cultural resources and land use during the construction and operation phase. The proposed action would have a positive economic impact on the Oklahoma City area. The continued improvements and expansion of the MMAC benefits local firms during the construction phase and local employment increases with MMAC expansions. While some adverse minor environmental impacts could occur from the proposed action, it is predicted that no significant adverse impacts or cumulative effects would result from these activities.

2.4.2 No Action Alternative

If the proposed new facility is not constructed at the MMAC, the existing environment would remain unchanged. Conversely the benefits of the proposed new facility would not be recognized, such as continued progress in increasing flight safety for commercial aircrafts or decreasing the strain on current MMAC resources and manpower.

3. AFFECTED ENVIRONMENT

3.1 PHYSICAL AND DEMOGRAPHIC SETTING

The MMAC is located on the western portion of the WRWA, in Oklahoma City Oklahoma. Oklahoma City, a city of approximately 407,900 persons, is the State Capital of Oklahoma and is centrally located within the state. The airport is located in the southwestern portion of the City of Oklahoma City in Oklahoma County, Oklahoma. The Radar Repair Facility will be located approximately 1 mile south of the main MMAC buildings. The location has an elevation of 1272 feet above mean sea level.

3.2 ENVIRONMENTAL SETTING

The environmental setting consists of the factors that describe the different features of the site. These include; geologic, hydraulic, climate, biological, cultural and historical, social and economic, and land and airspace uses. All of these factors must be considered when assessing the affected environment.

3.2.1 Geologic Elements

Topography

The Radar Repair Facility will be located on the MMAC leased property which occupies approximately 1,000 acres. A topographic map with the site location is provided in Exhibit 2. The MMAC area is part of the Prairies Topographic Unit (Wood and Burton, 1968) in Central Lowland Physiographic Province (Fisher and Chelf, 1968). The area is characterized by gently rolling surfaces formed by fluvial processes and erosion.

The MMAC site is located in a drainage divide situated between the North Canadian and South Canadian Rivers. Surface water in the area of the proposed action flows to the south and southeast into the Cow Creek watershed, which eventually discharges into the Canadian River.

Geology

The site is comprised of three distinct geologic units, including: soils, Quaternary deposits, and Permian-age bedrock.

Soils

The proposed radar repair facility site is on Renfrow Clay Loam soil type. The parent material of the soil is derived from several sources, including: weathered sandstone and shale derived from outcropping Permian-age rocks, old alluvium, and recent alluvium. The Renfrow Clay Loam consists of deep, gently sloping, reddish-brown soil. The surface layer is typically reddish-brown clay loam, slightly acidic, approximately ten inches thick, and has granular texture. The subsoil is approximately twenty-six inches thick, contains slightly more clay and is more compact than the surface soil. The underlying material is red clay underlain by partially weathered, compacted, dense and calcareous shale and clay. The soil is naturally well drained, and has a high water holding capacity. Management is needed during construction activities to control runoff and to maintain the soil structure, and moisture. Approximately the top 8 inches of soil on the proposed site has been removed and has been covered by backfill. In addition the site has been modified by terracing and plowing.

Quaternary Deposits

The site is overlain with Quaternary terrace deposits consisting of gravel, sand, silt, and clay (Wood, P.R., and Burton, L.C., 1968).

Permian Bedrock

The site is underlain by Permian-age rocks, which include in descending order, the Bison Formation; the Salt Plains Formation; Kingman Siltstone; the Fairmont Shale; and the Sumner Group.

The depth at which the above units are believed to be encountered in the vicinity of the site (approximately 5 mile west) are as follows: alluvial terrace deposits from surface to 40 feet,

Bison Formation from 40 to 160 feet, Salt Plains Formation from 160 to 360 feet, Kingman Formation from 360 to 390 feet, Fairmont Formation from 390 to 420 feet, and the Sumner Group from 670 to 1000 feet.

3.2.2 Hydrological Elements

Storm water runoff rates are high at the site as a result of the low rate of infiltration and percolation associated with the Renfrow soil series. Surface water from storm water runoff flows southwest to nearby intermittent streams and into the Cow Creek watershed.

The mean annual precipitation in the vicinity of the site is approximately thirty-one inches. The site is not located within a 100-year flood plain according to a Federal Emergency Management Agency (Elliot and Associates, 1994).

The principle groundwater aquifer in the vicinity of the site is the Garber Sandstone within the Sumner Group. The Garber is capable of yields in excess of 150 gallons per minute of good potable drinking water. The Garber yields water containing less than 500 mg/l dissolved solids.

Shallow groundwater has been consistently found within the Permian Bison Formation. Water levels in the Bison at the MMAC have been measured between 8 to 18 feet below ground surface, depending on the season (Screening Site Inspection report, RF Weston Inc. 1994). Limited quantities of groundwater are found within the Bison formation due to the fine-grained textures and associated poor permeability. Water quality is generally poorer than that of the underlying Garber Sandstone. Shallow groundwater at the site generally flows towards the southwest. Groundwater flow in the Garber has not been well defined, but has been inferred as approximately east to west.

3.2.3 Climate

Warm, moist air moves northward from the Gulf of Mexico and exerts influence over the southern and eastern sections of the state, including Oklahoma City. The average annual temperature is 60.3 degrees Fahrenheit. Temperatures of 100 degrees or more occur on an

average of 10 days a year. The humidity is low, and skies are clear approximately 40 percent of the time. Average annual rainfall is 30.89 inches. Summer rainfall is mainly in the form of showers or thunderstorms. Winter precipitation is associated with frontal passages. The highest amount of precipitation occurs in May and June. Snowfall averages less than 10 inches a year. On average the last freeze occurs in early April, and the first freeze is generally in early November.

3.2.4 Biological and Ecological Elements

3.2.4.1 Botanical Elements

The site is currently covered with a mixture of native and non-native grasses. Representative species include: Bermuda (*Cynodon dactylon*), brome (*Bromus sp*), fescue (*Festuca sp*) ryegrass (*Lolium sp.*) crabgrass (*Digitaria sp.*) panicum (*Panicum scribnerianum*) and Johnson grass (*Sorghum halapense*). Adjacent to the site for the proposed Antenna Systems facility is a small upland woodland stand (approximately 1 acre). The stand is young and not very diverse. During a site visit in October 2000 the following species were recorded: American Elm (*Ulmus Americana*), hackberry (*Celtis occidentalis*) eastern red cedar (*Juniperus virginianus*) and rough-leaved dogwood (*Cornus drummondii*).

According to the Soil Conservation Services (SCS) soil survey for Oklahoma County, the site is located on the Claypan Prairie range site. This is the most productive range site in the uplands. Undisturbed areas in excellent condition have a climax community consisting of 80 percent decreaser grasses, 5 percent forbes, and 15 percent increasers. The decreaser grasses are mainly big bluestem, little bluestem, Indian grass and switchgrass. The increasers include sideoats grama, tall dropseed, meadow dropseed, wild-indigo, and heath aster (Soil Conservation Service)

The A horizon, or top layer of the soil, has been removed from the site, and replaced with backfill. In addition, terracing and plowing have modified the vegetation.

3.2.4.2 Zoological Elements

The main areas of wildlife habitat in Oklahoma County are the prairies, the timbered uplands, and the timbered bottomlands. The areas possible affected by the proposed action are prairies timbered uplands and riparian woodlands. Some of the important wildlife in the county includes the bobwhite quail, mourning dove, fox, squirrel, deer, cottontail, jackrabbit, mink, opossum, skunk, muskrat, and beaver. Predatory animals include coyote, red and gray fox and bobcat. Predatory birds include hawks and owls. Nearby, large lakes attract waterfowl during the migratory season and winter. Species identified during a 1998, and an/or October 2000 site visit include: white tailed deer, boat tailed grackle, red-tailed hawk, European starling, scissor-tailed flycatcher, and mourning doves. There are no known threatened or endangered species that will be adversely affected with the implementation of the proposed action.

3.2.5 Historical, Archaeological and Cultural Sites

In 1998 an Archeological Investigation was performed for the MMAC by James Briscoe Consulting Services. The area of the proposed action was mapped and only minimally tested because it is in an area with extensive backfill cover. One isolated find was located near the site. A fire cracked probable boiling stone was found on the edge of the backfill area. It is unclear if it originated in the area or was deposited there as part of the backfilling activities (Briscoe Consulting Services, 1998). The find spot is along a low terrace on the north side of a small seasonal branch of Cow Creek. This location is just south of the proposed site in the adjacent wooded area. No additional artifacts were found in the area. It is presumed that a temporary camp may have existed in the area. There were no further management concerns for the isolated artifacts because of the minimal information contained in them. Care should be taken when excavating the backfilled area so not to disturb any potential World War II artifacts thought to be located in the fill areas of the MMAC. Briscoe Consulting Services recommends that at minimum a series of backhoe trenched should be dug at intervals across areas of the fill prior to development.

3.2.6 Social and Economic Setting

The MMAC is the sixth largest employer in Oklahoma City with over 4,500 employees. The MMAC operations have historically had great economic impacts on the local economy. Adverse social or economic effects are not anticipated with the proposed Radar Repair Facility.

3.2.7 Prime and Unique Farmlands.

Although the US Department of Agriculture's (USDA) soil Conservation Service publication shows the site area to be located on Renfrow clay loam, which is considered prime farmlands, correspondence from the USDA to Weston advised that there are no prime farmlands on the site (Exhibit 3).

3.2.8 Land Use and Zoning

Land use surrounding the site of the proposed new radar repair facility occupied by other MMAC facilities to the north. There is undeveloped land to the south, east and west. Existing Zoning for the site is Industrial. The adjacent properties to the north, east, south and west are all zoned Industrial. In addition, the site is part of the Oklahoma City Airport Environs Overlay Zone. The Overlay Zone defines noise contours associated with the airport. The site is within the high noise end of the contours.

3.2.9 Air Space Requirements

There are no aviation operations as part of the radar repair activities. Federal Aviation Regulation (FAR) Objects Affecting Navigable Airspace, are in affect for the entire MMAC. The criteria set in the FAR have been established to provide guidance in controlling the height of objects in the vicinity of the airport. The maximum height of the proposed building will be 25 feet, including all appurtenances. The building will not exceed the height regulations set forth in the FAR.

4. ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION

4.1 DIRECT AND INDIRECT EFFECTS AND THEIR SIGNIFICANCE

4.1.1 Air Quality

As result of construction activities on the proposed site, short-term dust impacts may occur. In order to minimize impacts from blowing dust, excavated soil should be exposed for as short a period of time as possible. Further controls such as watering, and then reseeding as appropriate should be used as necessary. The proposed action will not change current air quality or increase vehicular or air traffic emissions during operations.

4.1.2 Noise

During construction activities, noise is expected to increase in the immediate area. The proposed action will not have an increased affect on noise during facility operation.

4.1.3 Waste Generated by this Project

All waste produced during the construction and operation of the new Radar Repair Facility will be disposed of following the master pollution prevention plan for the MMAC. A satellite storage area for hazardous waste is located near the proposed site. Any waste oils generated during operations will be transported in the required secured containers to the satellite facility, where they will be picked up by a licensed waste transporter and deposited at an appropriate disposal site.

4.1.4 Herbicides and Pesticides

The implementation of the proposed action would not alter kinds, amounts, or methods for application of pesticides and herbicides at the site.

ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION

4.1.5 Water Resources

The implementation of the proposed action would not significantly increase the potable water needs of the facility.

4.1.6 Land and Soil Quality

The proposed construction will not significantly affect land quality in and around the site. The site is located on level terrain. Some disturbances of the land surface would occur during site preparation before construction, but reclamation following construction would result in minimal effects on local topography. The US department of agriculture has stated that the site is not prime farmland (December 2000). The site is not on a 100 year floodplain. Mitigation measures will be put in place to reduce potential impacts of the new facility and construction on the existing storm water flow.

4.1.7 Vegetation and Wildlife Resources

In 1998 a protected species survey was prepared for the MMAC by the US Army Corps of Engineers. Species currently listed by the US Fish and Wildlife and could be found in Oklahoma County, and could be in the vicinity of the proposed site are:

Interior least tern	<i>Sterna antillarum</i>	Endangered
Whooping crane	<i>Grus Americana</i>	Endangered
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Threatened
Piping plover	<i>Charadrius melodus</i>	Threatened
Arkansas river shiner	<i>Notropis girardi</i>	Threatened

Species listed as “Species of Special Concern” by the state of Oklahoma Department of Wildlife Conservation (ODWC) that could be found in Oklahoma County and in the vicinity of the proposed site are:

Texas horned lizard	<i>Phrynosoma cornutum</i>
Migrant loggerheaded shrike	<i>Lanius ludovicianus</i>
Barn Owl	<i>Tyto alba</i>
Bell’s vireo	<i>Vireo bellii</i>

ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION

The **Interior least tern** was listed as endangered on May 28, 1985 (50 FR 21784). In Oklahoma Interior least terns nest along most of the larger rivers as well as at the Salt Plains National Wildlife Refuge. They arrive on the breeding grounds from April to June. They migrate through central Oklahoma as summer residents using the Canadian and Cimarron Rivers.

The **whooping crane** was listed as endangered on June 2, 1970 (35 FR 8495). The main population of whooping cranes breeds in northern Canada and winters along the Texas Gulf coast. This population passes through western Oklahoma, primarily utilizing wetlands, rivers and grain fields as it moves between breeding and wintering grounds.

The **bald eagle** was first listed as endangered on March 11, 1967. On October 31, 1995 the status was downgraded to threatened (50 FR 17.11). Most of the US including Oklahoma is used by the bald eagles for wintering. Presently the number of nesting bald eagles is increasing in Oklahoma, but mostly in eastern Oklahoma. The bald eagle has been proposed for delisting.

The **piping plover** was listed as endangered in the watershed of the Great lakes and threatened in the remainder of its range on December 11, 1985 (50 FR 50726). The plovers migrate through Oklahoma each spring and fall between their breeding grounds along the Atlantic coast and the north great plains and great lakes and their wintering grounds along the Gulf coast.

The **Arkansas River shiner** was listed as threatened in the Arkansas River Basin on 11/23/98 (65 FR 64771). The historic range of the shiner includes tributaries and the main channel of the Arkansas River in northern and central Oklahoma. A large population thrives in the South Canadian River from the southern edge of Oklahoma City to several miles north of Norman Oklahoma. Other than one other population in New Mexico the shiner is scarce to absent from the remainder of its former home range, and likely does not exist in the main channel of the Arkansas river.

The **Texas horned lizard** is listed by the state of Oklahoma as a sensitive species. The lizard is distributed statewide, but most abundant in the central and western areas of the state in open, sandy, or loose soil areas.

ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION

The **migrant loggerheaded shrike** is listed by the state of Oklahoma as a sensitive species. Loggerhead shrikes pass through Oklahoma on migratory routes, and a small population remains in Oklahoma year round.

Wildlife surveys were performed in January and April of 1998 by the US Army Corps of Engineers, and observations were made in a site visit in October of 2000 by Rf WESTON. Field survey and documentation research indicate that neither Federally-listed nor State-listed species (species of concern) occur on or near the proposed site. Additionally, there is no evidence that any appropriate habitat for these listed species is present on the site. Limited cover and forage resources and extended periods of anthropogenic activity and disruption have rendered this area low in overall species diversity and an unlikely refuge for any sensitive wildlife. Dominant wildlife species observed during surveys on and surrounding the site are common to urban areas and are known to be adaptive to anthropogenic activities.

According to the 1998 Protected Species Survey, records do not indicate that Federal actions on surrounding MMAC lands have been halted or delayed due to issues associated with the Endangered Species Act. Information from previously filed Environmental Assessments indicate that no threatened or endangered species have been reported to exist on the site.

The Oklahoma Department of Wildlife Conservation reviewed the information for the proposed action against records of state endangered and threatened species and found that “no state listed species would be affected” by the proposed action. The US Fish and Wildlife Service has also stated that the “described action will have no effect on federally-listed or proposed species or their habitats” (Exhibit 3).

4.1.8 Socioeconomic

The proposed action will have no negative socioeconomic impacts. Employment opportunities through construction will increase. The additional improvement to the MMAC will continue to stimulate the regional economy. The proposed action will not require the relocation of any residences or businesses. There will be very little disruption to normal land traffic flow during the construction phase, and no change in traffic flow during operations.

ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION

The proposed action will have very little impact on the current electric and natural gas demands and distribution system. Modifications made to the distribution system to supply adjacent buildings will satisfy the additional demand by the new radar repair facility.

4.1.9 Cultural Resources

The proposed site does not require the acquisition of use of any publicly or privately owned land from an historic or archaeological site of national, state, or local significance. There is no indication that any adverse effects on significant resources exist. If during construction archeological materials are discovered the Oklahoma Archeological Survey should be notified immediately.

4.1.10 Land Use

The planned land uses in the vicinity of the proposed site are compatible with the proposed facility uses. The proposed site is currently zoned I-2, industrial. The department of public works has determined that the proposed use is in compliance with the City of Oklahoma City zoning laws.

4.1.11 Air and Land Traffic

The proposed action will have no significant impacts on current air and land traffic.

4.1.12 Radio Frequency and Other Electromagnetic Emissions

There are no expected levels of radar emissions for the proposed site. There is no indication of adverse effects on the environment because of radio, or other electromagnetic emissions.

4.2 ADVERSE ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED SHOULD THE PROPOSAL BE IMPLEMENTED, AND MITIGATION MEASURES.

The proposed radar repair facility is anticipated to result in a net positive impact and improvement in the MMAC facility. There are no adverse long-term impacts anticipated. There are five temporary short term adverse impacts that can not be avoided.

ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION

The proposed action will require raw material, energy, and land resource utilization. Resource utilization is inevitable, but the impact will be minimal. The positive impacts to the MMAC and therefore to the local economy will offset any adverse impacts.

An increase in ambient noise level in the immediate vicinity of the proposed facility will occur during construction and cannot be avoided. The impact will be limited because the site is approximately one mile from the majority of the MMAC campus.

Temporary aesthetic impairment of the immediate vicinity surrounding the site is inevitable. The impairments could include blowing dust, vapor and particulate emissions from construction equipment, and excavated soil storage piles. However when the construction is complete the aesthetic quality will improve.

The amount of disturbed land is estimated to be less than an acre. Minor amounts of erosion may occur during construction until final ground cover is completed. Proper grading, drainage and slope protection will minimize this impact.

Temporary traffic disruptions due to trucks and heavy equipment movement in and out of the construction site will have an unavoidable short-term impact. The impact will be minor because the location of the project is removed from heavy traffic areas.

4.3 MITIGATIVE MEASURES

In order to minimize the effects of the above impacts, various measures will be employed such as the construction of erosion control barriers and water retention ponds. Traffic effects may be mitigated by using barriers, flagmen or temporary fencing.

4.4 RELATIONSHIP BETWEEN SHORT-TERM USE OF THE ENVIRONMENT AND LONG-TERM PRODUCTIVITY

The primary objective of the proposed action is to build a facility to accommodate the radar repair group and assure that their necessary functions are accomplished.

ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION

The proposed action should be completed in spite of identified short-term adverse effects. These effects should be minimal, and the benefits of the proposed action should be significant and lasting.

4.5 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Irretrievable resources used by the favored alternative include energy, labor, construction materials and capital both during construction and operation. However, capital expenditures will be offset by the MMAC's continued positive impact on the community's economy through the creation of both permanent and temporary (construction) jobs at the MMAC, and the increase air safety provided by the Antennae Systems group activities at the proposed facility.

EXHIBIT 1

SITE PLAN

EXHIBIT 2

SITE LOCATION MAP

EXHIBIT 3

17 JANUARY 2001 – OKLAHOMA HISTORICAL SOCIETY

01 JANUARY 2001 – U. S. FISH AND WILDLIFE

27 DECEMBER 2000 – U. S. DEPARTMENT OF AGRICULTURE

**27 DECEMBER 2000 – WILDLIFE CONSERVATION
COMMISSION**

REFERENCES
